

REMARKS

Claims 16-38 are pending. Although the Summary of the Office Action reports that claims 16-38 are pending, and page 1 of that Office Action recites claims 25-38 as being new, applicants respectfully submit that claim 39 was also included in the Preliminary Amendment of (insert filing date of Preliminary Amendment), and the “Response to Notice of Non-Compliant Amendment” mailed September 17, 2003. However, claim 39 is herein cancelled, as indicated immediately below. If applicants are in error, the Examiner is requested to promptly notify applicants’ representative.

Claims 25-27, 31, 32, 34, and 38 are hereby amended. Claim 39 is cancelled. No new matter is introduced through these amendments. Support for hydrogen as possible R, Q and P substituents, respectively in claims 25 and 26, is found, for example, in the definition of T in claim 25 as “five- to seven-membered heterocyclic ring,” and at page 6, lines 10-12 of applicants’ disclosure, and in the disclosure of numerous examples of compounds bearing thieryl substitutents, for example, compound No. 7.

Objection to Title

The title has been amended to “OXAZOLIDINONE PIPERAZINYI DERIVATIVES AS POTENTIAL ANTIMICROBIALS” as suggested by the Examiner, and the objection is thereby believed to be mooted.

Objection to Abstract

The abstract has been amended to generally describe the subject matter of claim 25, including the figure and utility thereof, as included in the disclosure, per the Examiner’s suggestion, and the objection is thereby believed to be mooted.

Priority

Applicants have amended the specification to include specific reference to the application from which priority of the present application is claimed, as a continuation-in-part. As the specific reference required by 35 U.S.C. §120 has been made in the data sheet of the present application, applicants submit that the petitions, surcharges and statements mentioned in the Office Action at page 4 are not required at this time. The Examiner is requested to promptly inform applicants’ representative if this is not the view of the Office.

Objection to Claims

Claim 27 has been objected to for reciting compound numbers. This claim has been appropriately amended, thereby mooting the objection.

Rejection under 35 U.S.C. §112, Second Paragraph

Claims 25, 26 and 28-39 have been rejected as being indefinite. The particular rejections are addressed individually below.

Claims 25, 31 and 33: The word “heterocyclic,” as the Examiner notes, implicates at least one ring, and at least one carbon atom having been replaced by a heteroatom. Applicants submit that the nature of the heteroatom, as would be understood by one of ordinary skill in the art, is that it can be nitrogen, oxygen or sulfur. The ring or rings can be saturated or unsaturated due to double or triple bonds within or exo to the ring. Fused, bridged and spiro rings with heteroatoms are also included as “heterocyclic” structures. Aromatic rings with heteroatoms are included within the term “heteroaromatic,” as used applicants’ specification. Applicants submit that the above would have been clearly understood by one of ordinary skill in the art as conveyed to such a person at the time of filing of this application.

Claims 25 and 28-30: The term “halogen-CN” has been replaced by “halogen, -CN,” as was applicants’ intention. This is clear from the disclosure, for example, on page 4, lines 18-19 of applicants’ specification as filed. The rejection is now moot.

Claims 26 and 28-30: The term “heteroaryl except M = S, Q = P = H, W = (CO)” has been rejected as unclear. The term “heteroaryl except M = (CO), Q and P = H and M = S, wherein M = sulphur and oxygen” has been rejected as unclear. Applicants submit that the intention in claim 26 was to exclude unsubstituted thiophene compounds when W is CO (carbonyl). Amendment has been made to claim 26 to remove the rejected phrases and replace them with the following, “with the proviso that when M is sulphur, and W is (CO), then Q and P cannot be hydrogen.” Applicants submit that the claim is not unclear.

Claims 34-39: The term “heteroaryl except W = (CO), Q and P = H and M = S, wherein M = sulphur” has been rejected as unclear. Applicants submit that the intention in claim 34 was to exclude unsubstituted thiophene compounds when W is CO (carbonyl). Amendment has been made to claim 34 to remove the rejected phrases and replace them with the following, “with the proviso that when M is sulphur, and W is (CO), then Q and P cannot be hydrogen.” Applicants submit that the claim is not unclear.

Claim 34: The period has been removed from the claim by amendment.

Claims 34-38: Definitions of R₁₂ and G have been inserted, as supported by, for example, the definition of R₁₂ (“a leaving group selected from the group consisting of -CHO, fluoro, chloro, bromo, SCH₃, -SO₂CH₃, -SO₂CF₃ or OC₆H₅”) and G (“NH”) in claim 31, and in Scheme I on page 18 of applicants’ specification as filed. The addition of -CHO as a member of the R₁₂ definition is supported by, for example, page 22, lines 10-15 of applicants’ disclosure.

Claim 36: This claim has been rejected, as the Examiner has stated that Formula VI is furaldehyde; R₁₂ cannot be -CHO, P and Q cannot be hydrogen, and M is sulfur. Applicants

submit that the intent upon filing was that Formula VI be furaldehyde, as explicitly recited, for example, according to synthesis Method B on page 22, lines 10-15 of applicants' disclosure as filed, and in claim 32 as added by preliminary amendment. Accordingly, -CHO has been added to the definition of R₁₂, as noted immediately above.

Claim 38: This claim has been rejected as the Examiner has stated that "including N-methyl pyrrole" is within the broad recitation of the compound of Formula VI. Claim 38 has been amended to remove the narrower recitation of "including N-methyl pyrrole."

Claim 38: This claim has been rejected, as the Examiner has stated that, as relates to the phrase "Formula VI including N-methyl pyrrole," R₁₂ cannot be H, P and Q cannot be hydrogen, and M is sulfur. The phrase giving rise to the objection has been deleted, thus mooting the objection.

Claim 39: The claim has been cancelled, mooting the rejection.

Rejections Under 35 U.S.C. §112, First Paragraph

Claims 34 and 35 have been rejected as non-enabled, for not reciting catalyst and reagent. Applicants have amended these claims to include the reagents as indicated by the Examiner. Carbon monoxide has been included in the claims, and as catalysts are generally required, this element is included in the claims as well.

Claims 25, 26, 28-35 and 39 have been rejected as non-enabled, for not reasonably providing enablement for linker groups other than CH₂, C(O), -C(O)-C(O)- and CH₂C(O). The claims have been amended to omit groups other than those listed above. These rejections are thereby believed to have been overcome.

Rejection Under 35 U.S.C. §102(b) Over Pae (Bioorg. Med. Chem. Let. 9, (1999), pp. 2685-90)

Claims 25, 31 and 32 have been rejected as anticipated by Pae. Applicants respectfully traverse the rejection for the following reasons.

Pae discloses particular compounds which have been viewed by the Examiner as anticipating applicants' claims. Applicants submit that present amendments to claims 25, 31 and 32 have obviated the rejection.

Rejection Under 35 U.S.C. §103(a) Over Gadwood et al. (United States Patent No. 6,277,985)

Claims 25 and 31 have been rejected as obvious over Gadwood et al. Applicants respectfully traverse the rejection for the following reasons.

Gadwood et al. discloses, as compound VIII-G, a compound with a sulfone (SO_2) linker. The Examiner's position appears to be that it would have been obvious to a medicinal chemist of ordinary skill to prepare a similar compound with a sulfide linker in view of the alleged occurrence of cytochrome P450 enzymes and flavin-containing monooxygenase enzymes in the human liver. The Examiner further asserts that the sulfone would be a more stable active metabolite.

In fact, Gadwood et al. does not contain any such disclosure concerning oxidation of sulfides in the human liver, or by means of any cytochrome or monooxygenase enzymes. Gadwood et al. contains no suggestion whatsoever that one could prepare any compounds which would metabolize, stably or not, to the Gadwood et al. compounds. Further, Gadwood et al. does not suggest in any way that enzymatic reaction taking place on applicants' claimed compounds could produce compounds of Gadwood et al. containing an oxidized sulfur linker, as opposed to any other transformation which might take place on such compounds. The same arguments apply with equal force to the rejection of synthesis claim 31.

Gadwood et al. cannot be used to make out a *prima facie* case of obviousness in the absence of such suggestions or motivations to modify the disclosure of Gadwood et al. Applicants respectfully submit that no such case of obviousness has been made out, and applicants request reconsideration and withdrawal of the rejection based on this reference.

Double Patenting Rejection Under 35 U.S.C. §101 Over Copending Application 09/906,215

Claims 16-24 have been provisionally rejected as claiming the same invention as that of claims 16-24 of copending application 09/906,215. Applicants submit that the rejection is premature, as no claims have been indicated as allowable to date. Applicants request that the present provisional double patenting rejection be withdrawn until such time as claims in one or the other application have been indicated as allowable.

CONCLUSION

Applicants respectfully submit that the claims are currently allowable, according to the amendments and arguments presented herein, and a Notice of Allowance is requested as the next transmission from the Office.

Respectfully submitted,

MEHTA et al.



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